

2 a disk having at least one side with a plurality of tracks, each track including
3 at least one group of sectors, each sector within said group includes a first field and
4 a second field, the first field in each sector identifying a value in the corresponding
5 second field, each value in the second field of each sector providing a portion of
6 position information, the values in the second fields within the group of sectors, in
7 combination, providing the position information [a burst in a servo field which
8 corresponds to a portion of track position information, said plurality of portions of
9 track position information in the corresponding plurality of sectors within said
10 group are combined to provide a track position of a corresponding track].

1 2. (Amended) The disk as recited in claim 1, wherein each track
2 including at least one group of consecutive sectors [said plurality of bursts are
3 located on consecutive sectors].

1 3. (Amended) The disk as recited in claim 1, wherein each sector within
2 said group including a third field identifying a track position of the disk, the first
3 and second fields in the group of sectors, and the third field in one of the sectors, in
4 combination, providing complete position information of the disk [2, wherein each
5 servo field in each sector includes a second burst that provides a sector sequence
6 number identifying the sequence position of each of said consecutive sectors].

1 4. (Amended) The disk as recited in claim 1, wherein when the first field
2 in a sector is at a first value, the corresponding second field identifies a quadrant of
3 the disk [each track includes at least one group of six sectors].

Cancelled

1 5. (Amended) The disk as recited in claim 4, wherein when the first field
2 in a sector is at a second value, the corresponding second field identifies a side of the
3 disk [the six sectors are in consecutive order].

1 6. (Amended) The disk as recited in claim 5, wherein when the first field
2 in a sector is at a third value, the corresponding second field identifies higher order
3 bits of position information [each servo field in the six sectors includes a second
4 burst that provides a sector sequence number identifying the sequence position of
5 each of said consecutive sectors, said plurality of portions of track position
6 information and the corresponding sequence number in the consecutive six sectors,
7 in combination, providing a position of a corresponding track].

1 7. (Amended) The disk as recited in claim 1, wherein the first field in one
2 sector within the group of sectors is at a first value to identify the corresponding
3 second field as a quadrant of the disk, the first field in at least one additional sector
4 within the group of sectors is at a second value to identify the corresponding second
5 field as a side of the disk, and the first field in at least another additional sector
6 within the group of sectors is at a third value to identify the corresponding second
7 field as a track position information [a first burst in a first servo field of a first sector
8 provides a quadrant position of said disk].

1 8. (Amended) The disk as recited in claim 7, wherein the combination of
2 values in the second fields of the sectors within the group providing the quadrant,
3 side, and track of the disk [1, wherein said disk has a second side with a second
4 plurality of tracks, wherein each track on each side of said disk includes at least one
5 group of sectors each having said burst in said servo field corresponding to a
6 portion of track position information].

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1 9. (Amended) The disk as recited in claim 1, wherein the second field in
2 a first sector within the group providing a quadrant of the disk, the second fields in
3 second and third sectors within the group providing a side of the disk, and the
4 second fields in fourth, fifth, and sixth sectors within the group providing higher
5 order bits of a track position, each sector within the group further including a third
6 field identifying lower order bits of the track position [8, wherein a first burst in a
7 first servo field of a first sector and a second burst in a second servo field of a second
8 sector providing a first portion and a second portion of disk side position
9 information, respectively, said first and second portions of disk side position
10 information in combination providing a track position of a side of the disk].

1 10. (Amended) A hard disk drive, comprising:
2 a housing;
3 a spin motor mounted to said housing;
4 an actuator arm mounted to said spin motor;
5 a disk attached to said spin motor, said disk having at least one side with a
6 plurality of tracks, each track including at least one group of sectors, each sector
7 within said group includes a first field and a second field, the first field in each

8 sector identifying a value in the corresponding second field, each value in the
9 second field of each sector providing a portion of position information, the values in
10 the second fields within the group of sectors, in combination, providing the position
11 information [a burst in a servo field which corresponds to a portion of track position
12 information, said plurality of portions of track position information in the
13 corresponding plurality of sectors within said group are combined to provide a
14 track position of a corresponding track]; and
15 a read/write head mounted to said actuator arm for reading said at least one
16 side of said disk.

1 11. (Amended) The hard disk drive as recited in claim 10, wherein each
2 track including at least one group of consecutive sectors [1, wherein said plurality of
3 bursts are located on consecutive sectors of each track].

1 12. (Amended) The hard disk drive as recited in claim 10, wherein each
2 sector within said group including a third field identifying a track position of the
3 disk, the first and second fields in the group of sectors, and the third field in one of
4 the sectors, in combination, providing complete position information of the disk [11,
5 wherein each servo field in each sector includes a second burst that provides a sector
6 sequence number identifying the sequence position of each of said consecutive
7 sectors].

1 13. (Amended) The hard disk drive as recited in claim 10, wherein when
2 the first field in a sector is at a first value, the corresponding second field identifies a
3 quadrant of the disk [wherein each track includes at least one group of six sectors].

1 14. (Amended) The hard disk drive as recited in claim 13, wherein when
2 the first field in a sector is at a second value, the corresponding second field
3 identifies a side of the disk [said six sectors are located consecutively].

1 15. (Amended) The hard disk drive as recited in claim 14, wherein when
2 the first field in a sector is at a third value, the corresponding second field identifies
3 higher order bits of position information [each servo field in the six sectors includes
4 a second burst that provides a sector sequence number identifying the sequence
5 position of each of said consecutive sectors, said plurality of portions of track
6 position information and the corresponding sequence number in the consecutive six
7 sectors, in combination, providing a position of a corresponding track].

1 16. (Amended) The hard disk drive as recited in claim 10, wherein the
2 second field in a first sector within the group providing a quadrant of the disk, the
3 second fields in second and third sectors within the group providing a side of the
4 disk, and the second fields in fourth, fifth, and sixth sectors within the group
5 providing higher order bits of a track position, each sector within the group further
6 including a third field identifying lower order bits of the track position [10, wherein
7 said disk further comprises a second side with a second plurality of tracks, wherein
8 each track on each side of said disk includes at least one group of sectors each

9 having said burst in said servo field corresponding to a portion of track position
10 information; and]

11 [wherein said hard disk drive further comprises a second read/write head
12 mounted to said actuator arm for reading said second side of said disk].

17. (Amended) A method for providing servo information on a disk in
a hard disk drive, comprising [the steps of]:

a) providing a disk having at least one side with a plurality of tracks,
each track including at least one group of sectors, each sector within said group
including a first field and a second field, the first field in each sector identifying a
value in the corresponding second field, each value in the second field of each
sector providing a portion of position information [includes a burst in a servo
field which corresponds to a portion of track position information];

b) reading said first and second fields in the group of sectors
[plurality of bursts]; and

c) determining position information of the disk in response to reading
the first and second fields in the group of sectors [combining said plurality of
portions of track position information to provide a track position of a
corresponding track].

18. (Amended) The method as recited in claim 17, wherein each sector within
the group of sectors including a third field, and wherein act c) comprises determining
complete position information of the disk in response to reading the first and second
fields in the group of sectors, and reading the third field in one of the sectors within the
group

6 [step a) further comprises the step of: providing a second burst in each of the
7 plurality of servo fields that provides a sector sequence number identifying the sequence
8 position of each of said sectors;
9 wherein the method further comprises the steps of:
10 reading said second burst in each sector; and
11 combining said plurality of portions and their corresponding sequence numbers
12 to provide a position of a corresponding track].

1 19. (Amended) The method as recited in claim 17, wherein each sector
2 within the group of sectors including a third field, and wherein act c) comprises
3 determining a quadrant, side, and track of the disk in response to reading the first
4 and second fields in the group of sectors, and reading the third field in one of the
5 sectors within the group [a first burst in a first servo field of a first sector providing a
6 quadrant position of said disk].

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3 20. (Amended) The method as recited in claim 17, wherein act c)
4 comprises:
5 determining a quadrant of the disk in response to reading the first and second
6 fields in a first sector within the group;
7 determining a side of the disk in response to reading the first and second
8 fields in a second sector within the group;
9 determining higher order bits of a track of the disk in response to reading the
10 first and second fields in a third sector within the group; and
determining lower order bits of the track of the disk in response to reading a
third field in one of the sectors within the group

11 [in step a), said disk has a second side with a second plurality of tracks,
12 wherein each track on each side of said disk includes at least one group of sectors
13 each having a burst in servo field, wherein a first burst in a first servo field of a first
14 sector and a second burst in a second servo field of a second sector providing a first
15 portion and a second portion of disk side position information respectively; wherein
16 said method further comprises the steps of:
17 d) reading said first and second portions of disk side position
18 information; and
19 e) combining said first and second portions to provide a position of a side
20 of the disk].